

CENTER OF EXCELLENCE IN ENVIRONMENTAL TOXICOLOGY

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Institute Receiving Award	University Of Pennsylvania
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DESCRIPTION (provided by applicant):	<p>This is a competing continuation for the Center of Excellence in Environmental Toxicology (CEET), the P30 Environmental Health Sciences Core Center (EHS CC) at the University of Pennsylvania. The Center is comprised of 61 members from 20 Departments and 6 Schools, with equal representation of basic and clinician scientists drawn from the Perelman School of Medicine (PSOM) and Children's Hospital of Philadelphia (CHOP). The synergistic combination of basic and clinician-scientists places the CEET in a strong position to conduct high-impact, translational EHS research. The CEET is the only EHS CC in the Commonwealth of Pennsylvania and has built a research agenda that is responsive to the environmental health needs of the region knowing that the solutions can be translated elsewhere. The CEET mission is to "elucidate the mechanistic links between environmental exposures and human disease and translate findings into action to improve the health of vulnerable individuals, and local, national and global communities". Our theme in Translational Environmental Health will be accomplished as follows. The CEET will utilize its affinity group structure in Lung and Airway Disease to address diseases associated with poor air quality, ozone, PM2.5 and asbestos exposure; in Oxidative Stress and Oxidative Stress Injury to elucidate how environmental exposures exacerbate oxidative stress and inflammation; in Reproduction, Endocrinology & Development to determine how environmental exposures act at windows of susceptibility to cause defects from conception to adulthood; and in Gene-Environment Interactions to determine how environmental exposures confer disease risk due to differences in genotype and epigenotype. Translation of these findings on an individual bases will lead to Precision Environmental Medicine (PREEM). The CEET builds integrated research teams to study topics that transcend affinity group (e.g. endocrine disrupting chemicals and epigenetics) and translational research teams to tackle environmental health challenges identified by its Community Outreach and Engagement Core (e.g. asbestos exposure in Ambler) with the goal of disseminating findings back to the affected communities. The CEET provides the tools required for PREEM by maintaining an Integrative Health Sciences Facility Core for human subject studies, a Translational Biomarker Core to measure biomarkers of exposure and effect, and a CEET Informatics Core to integrate "omics" data to capture the "exposome". The CEET builds capacity in EHS by funding pilot-projects and</p>

career development. This structure enables the CEET to inform the decisions of policy makers and to improve public health in the citizens of the Commonwealth of Pennsylvania now and in the future.

Science Code(s)/Area of Science(s)	Primary: 31 - Environmental Health Sciences Centers Secondary: 01 - Cell/Molecular
Publications	See publications associated with this Grant.
Program Administrator	Claudia Thompson (thomps14@niehs.nih.gov)